REMARKS

The Examiner's recognition of Applicants' invention by the indication of allowable subject matter for claims 6, 7, 11 and 16 is gratefully acknowledged.

Claim 8 is amended to clarify that the first communication controller refers to the antecedent first communication controller in claim 2, upon which it is dependent.

Claim Rejection under 35 USC § 112

Claim 8 was rejected under35 USC § 112 as incomplete as to the relationship between the first communication controller in claim 2 and the first communication controller in claim 8. The claim has been amended to make clear that the claim refers to the same first communication controller as in claim 2 and provide a proper antecedent relationship. Therefore, it is requested that the rejection be withdrawn.

Claim Rejection under 35 USC § 103

Claims 1-5, 8-10, 12-15 and 17-23 were rejected under 35 U.S.C. § 103 as unpatentable over United States Patent No. 6,282,668, issued to Neudecker in 2001, in view of United States Patent No. 6,405,330, issued to Hanf et al. in 2002.

Neudecker describes a CAN system of the type described in the Background of the present application and shown in Fig. 1. Referring to Fig. 1 in Neudecker, the system comprises a main bus station 1 and bus stations 2, 3 and 4, commonly referred to as slave stations, col. 3, beginning at line 57. Each slave station continually monitors bus

communications to identify communications intended for the particular station, referred to in Neudecker as a selection telegram, and then wakes up the station in response to the selection telegram, col. 4, line 34-42. It is significant that the detector circuit for the station must be continuously supplied with power in order to monitor the bus communications, col. 2, lines 59-63, and col. 4, lines 46-48. In contrast, Applicant's invention provides a CAN wake-up controller that switches on the slave controller in response to a non-interfering communication biasing signal. The practitioner would appreciate that the wake-up signal in Neudecker is a normal CAN communication that would interfere with other signals if not regulated, and so would is not a non-interfering signal. Moreover, because it uses a non-interfering signal, Applicant's system eliminates the need for the current drain required in the Neudecker system to monitor CAN telegrams, a substantial advantage.

The rejection recognizes that Neudecker does not use a non-interfering signal and points to Hanf et al. Hanf et al. describes a testing method that includes transmitting signals T1, T2, T3, T4 having varying voltages until interference is detected, see col. 3, beginning at line 63, and col. 13, beginning at line 48, and Fig. 6. However, the testing method, in part, evaluates interference with wake-up reception, i.e., interference with the signal used to wake-up a subscriber, col. 13, line 65, to col. 14, line 12. It is significant that the test signal does not itself wake-up the subscriber, but rather is transmitted to interfere with the wake-up signal to the subscriber. Thus, Hanf et al. is directed to testing a CAN system that includes conventional subscribers that monitor CAN communications

to identify wake-up signals, that is, devices of the type used in Neudecker.

Therefore, both Neudecker and Hanf et al. describe systems in which the communication controller (the slave station in Neudecker or the subscriber in Hanf et al.) monitors CAN communications for a wake-up signal that is a normal communication and so a potentially interfering communication. Neither reference shows a communication controller that wakes-up in response to a non-interfering communication transmitted over the CAN bus. Without this, the references, whether taken separately or combined, do not point to Applicants' invention.

Claim 1 is directed to Applicants' controller area network that includes communication controllers in electrical communication with a CAN bus. The claim calls for a CAN wake-up controller operable to switch at least one communication controller to an active state in response to an non-interfering communication biasing signal applied to the CAN bus. Both Neudecker and Hanf et al. describe networks that use CAN communications to wake up the devices, which the practitioner would recognize as potentially interfering, as opposed to a non-interfering signal. Hanf et al. discloses test signals that are non-interfering, in part to evaluate the effectiveness of the wake-up signals. Still further, in accordance with the claim, the CAN wake-up controller is operable to switch the communication controller to an inactive state in response to termination of the non-interfering biasing signal. Neudecker and Hanf et al. are silent as to switching the controllers off, clearly contemplate conventional procedures, and in no way even remotely suggest switching devices off by terminating a non-interfering signal

over the CAN bus. Without these features, the references, even when combined, do not point the practitioner to Applicants' controller area network in claim 1.

Claims 2-5, 8-10, 12-15 and 17 are dependent upon claim 1 and so not taught or suggested by Neudecker and Hanf et al. at least for the reasons set forth with regard to that claim.

Claim 18 is directed to a method of operating a controller area network that includes switching a first communication controller to an active state in response to the application of a non-interfering communication biasing signal to the CAN bus. For the reasons herein, neither Neudecker not Hanf et al. nor their combination point to use of a non-interfering signal to switch a controller to an active state. Thus, the references do not lead to Applicants' method in claim 18, or in claims 19 and 20 dependent thereon.

Claim 21 is directed to a controller area network that includes means for switching a first communication signal to an active state in response to application of a non-interfering communication biasing signal to the CAN bus. For the reasons herein, the references do not show a non-interfering signal for switching a controller to an active state, and so do not suggest Applicants' controller area network in claim 21, or dependent claims 22 and 23.

Accordingly, it is respectfully requested that the rejection of the claims based upon Neudecker and Hanf et al. be reconsidered and withdrawn, and that the claims be allowed.

Conclusion

Claims 6, 7, 11 and 16 were objected to as dependent upon a rejected base claim. In view of the remarks herein, it is believed that the claim 1 is allowable. Accordingly, it is requested that the objection be withdrawn, and that all claims be allowed.

If it would further prosecution of the application, the Examiner is urged to contact the undersigned at the phone number provided.

The Commissioner is hereby authorized to charge any fees associated with this communication to Deposit Account No. 50-0831.

Respectfully submitted,

Douglas D. Fekete
Reg. No. 29,065
Delphi Technologies, Inc.
Legal Staff – M/C 480-410-202
P.O. Box 5052
Troy, Michigan 48007-5052

(248) 813-1210